

REMARKS

Claims 1-8 and 20-22 are now pending in this application. Claims 9-19 have been canceled and claims 20-22 have been added by this amendment. Each of the pending claims is believed to define an invention that is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Claims 4-8 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite. Regarding claim 4, claim 4 is described at pages 29-31 of the Substitute Specification regarding the seventh embodiment. As shown in Figures 21A, 21B and 22B, the barrier and wiring metal 35, 36 have first portions 37A on the base oxide film 12 and second portions 37B at a middle section of the upper oxide film 26 above the first portions 37A. Each of the first portions 37A has a width W1 wider than a width W3 of each of the second portions 37B. Regarding claims 5-8, these claims as described at pages 31-32 of the Substitute Specification regarding the eighth embodiment of the invention. As shown in Figures 23A-23D, a base wiring area 90 is formed on an upper surface 10A of the substrate 10. A dispersion prevention film 95 is formed across the entire upper surface 10A of the substrate 10. In the example described in the specification, the dispersion prevention film is a silicon nitride film.

At least the portions of the specification mentioned above discussing the seventh and eighth embodiments of the invention provide support for claims 4-8. In view of the above, it is respectfully submitted that all pending claims are in compliance with 35 U.S.C. 112. Therefore, the withdrawal of this rejection is respectfully requested.

Claims 1, 2 and 5 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,268,279 to Okada.

Independent claim 1 has been amended to recite that a groove having a sidewall is formed in the base oxide film around respective ones of the first holes. For example, as shown in Fig. 9C, a groove 52 is formed in the base oxide film 12. The groove 52 includes a sidewall.

New claim 20 recites that the nitride film patterns are formed in the groove and have a portion around the sidewall that is thicker than a portion in a bottom of a groove. New claim 22 recites that a sidewall film is formed on the sidewall of the groove. As described in the specification, a nitride film 56 is formed to have a hole pattern substantially in the center of the groove 52 with a size and shape that encloses the groove 52. The nitride film pattern 56 maybe formed so that a part around the sidewall 56A of the wiring groove 28 is thicker than the part on the bottom of the groove 56B, see Fig. 8D and pages 14-15 of the specification.

Okada does not teach or suggest a groove formed in the base oxide film as now recited in amended claim 1. Okada discloses a first interlayer insulating film 103. The first interlayer insulating film 103 has a via hole 107 in an area on the first wiring 102, column 4, lines 40-50 and Fig. 1B. An etcher stopper film 105 is formed on top of the first interlayer insulating film 103. The first interlayer insulating film 103 does not include any type of groove. In comparison, independent claim 1 now recites that the base oxide film has a groove formed therein. Additionally, dependent claims 20, 21 and 22

recite further distinguishing features of the present invention. Claim 21 recites that the nitride film has a thicker portion formed around the sidewall of the groove. The etching stopper film 105 of Okada et al. has a uniform thickness. There is no suggestion in Okada of varying the thickness of etcher stopper film 105. New claim 21 recites that a sidewall film is formed on a sidewall of the groove. Okada makes no mention of a sidewall film nor of a groove. Accordingly, it does not teach or suggest either of these features. Moreover, claim 22 recites specific properties of the sidewall film that are not present in Okada.

In view of the above, it is clear that the cited reference does not teach or suggest a base oxide film having a groove formed therein as recited in the claimed combination. Therefore, the withdrawal of this rejection is respectfully requested.

Claim 3 has been allowed. Claim 7 has been indicated as being allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph.

In view of the above, it is respectfully submitted that all claims are now in condition for allowance. Accordingly, early issuance of a Notice of Allowance is respectfully solicited.

If the Examiner is of the opinion that the prosecution of this application would be advanced by a personal interview, the Examiner is invited to telephone undersigned counsel to arrange for such an interview.

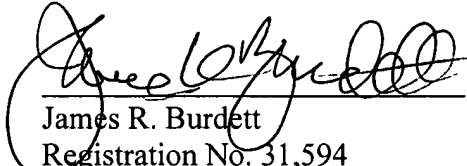
U.S. Application No. 09/736,140
Amendment in Response to Office Action dated September 8, 2003

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

Respectfully submitted,

6/2/03
Date


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